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CENTRAL INTELLIGENCE AGENCY

REPORT NO. [REDACTED]

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SUPPLEMENT TO REPORT NO. [REDACTED]

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- 25X1 1. [REDACTED] whether the following data concern the single-seater or the two-seater version of the plane but believed that the production methods were the same for both types. Contrary to his previous statements, 25X1 [REDACTED] the production of single-seater, single-engine fighters of the Yak-22 type was in full swing [REDACTED] and was con- 25X1 tinued until the fall of 1947, when the production of single-seater, single-engine jet fighters was started. The designation of this last type was not known. The production of two-seater, single-engine jet aircraft started in the summer of 1948. [REDACTED] this 25X1 was a training and reconnaissance plane. (1)
- 25X1 2. The assembly shop had a main assembly line and several sub-assembly lines [REDACTED] (2) While only one aircraft was finally assembled at one time, several frames and wings were simultaneously fitted. The frames and wings were transported by trolleys through the assembly to the paint shop and from there on special carriages through the final assembly back to the paint shop.
- 25X1 3. The fuselage was constructed with only steel tubings rather than aluminum parts. Rust was removed from the tubes and grease was removed by sand blasting, and then they were varnished and assembled. (3) PWs who were specialists confirmed that the covering of the fuselage was duraluminum 2 to 3 mm thick. The tubes were welded together and no connections were used for fastening the sections. The wings were connected to the fuselage from below by tubes. (4) The ribs were pressed aluminum profiles, 2 to 2½ mm thick. [REDACTED] They were connected by one stringer, an aluminum tube 10 cm in diameter and fastened by rivets. (5) The fuselage covering was assembled to the structural parts by rivets. The ribs and stringers were drilled before going to the assembly figs.
- 25X1 4. [REDACTED] the type and number of machines and fixtures to hold the parts being machined. He knew that the tube was pushed into a boring machine, fastened, and bored and said that a similar method was used for the other parts. The plant was equipped with various German and American high speed lathes. Some of the high speed steel was German Vidia-steel. The origin of the other steel was unknown.

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5. The plant produced all parts for the aircraft except turbines, armament, and electric equipment. No chemical treatment of sheet metals was observed. Castings were hardened in electric hardening furnaces. Aluminum sheet did not crack like duraluminum unless it was formed within an hour after the heat treatment. [redacted] Cracked sheets were thrown away. Damages to aluminum sheets were mostly cracks caused by a lack of dilatibility and occasionally cracks caused by folding the aluminum. Stored sheets did not have any coating but were greased.

6. The turbo-jet power plant was about $3\frac{1}{2}$ meters long and 0.8 to 1 meter in diameter. The exhaust had a diameter of 35 to 40 centimeters, the weight was not determined. (6) Service ceiling was 11,000 meters [redacted] RPM and thrust were not known. Endurance was 40 to 50 minutes. No overhauling of turbines was observed at the plant. The new power plants were delivered and installed in the aircraft at the plant. Gasoline motors were used as starters. [redacted] the fuselage covering being assembled to the airframe by pneumatic riveting.

7. Disassembly of the aircraft for shipment was done by about six men and took two to three hours. (7)

[redacted] Comments.

- (1) The single-engine fighter constructed at Tbilisi up to 1947 is, according to this report, the Yak-22. A previous report designated as Yak-22 a two-seater, jet aircraft produced at Tbilisi since mid-1948. [redacted] The single-engine fighter constructed prior to 1947 is believed to be a training plane, possibly the Yak-11. [redacted] However, since all fighters were given uneven series of type numbers (Yak-1, Yak-3, Yak-7, etc.) and combat aircraft were designated with even numbers (Yak-6, Yak-8, Yak-12, etc.) the Yak-22 should be a training aircraft, probably a jet-powered type aircraft because of its high designation number. A conversion to the production of single-seater jet fighters and, in summer 1948, to the production of a two-seater version, agrees with previous information for the period reported. It was also reported that this type was utilized as a reconnaissance aircraft.
- (2) For sketch of assembly line see Annex 1, sketch 1.
- (3) For reproduction of tube frame see Annex 1, sketch 2.
- (4) For wing assembly see Annex 2, sketch a.
- (5) For reproduction of ribs and stringer see Annex 2, sketches b and c.
- (6) The dimensions of the turbo-jet power plant support the assumption that the engine is of the Jumo 004 type. See Annex 2, sketch d for jet-engine.
- (7) The data on features and production methods of the aircraft type are considered generally to be correct.

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